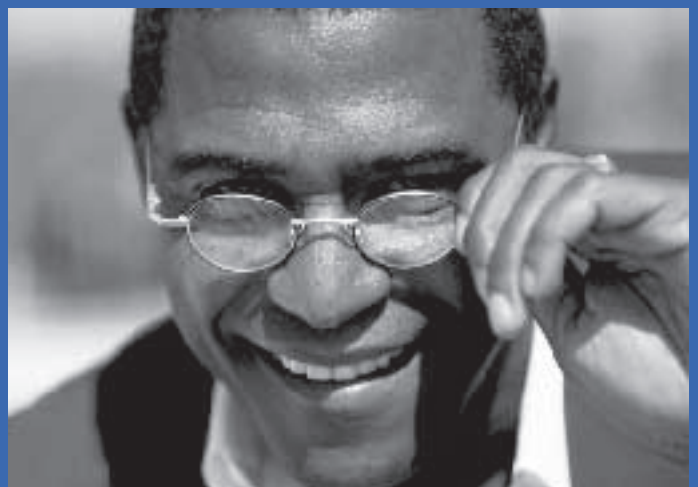


# TEXAS PLAN TO REDUCE CARDIOVASCULAR DISEASE AND STROKE

MAY 2002

FIRST EDITION



Texas Council on Cardiovascular  
Disease and Stroke

Texas Department of Health

<http://www.tdh.state.tx.us/wellness/>

# A Message from the Chair

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Cardiovascular disease and stroke remain the number one and number three causes of death in Texas and account for nearly one half of all deaths in our state. Besides the emotional and human effects, the future costs of cardiovascular disease and stroke will exceed the nine (9) billion dollars of the previous year because of several factors.

First, aging of the population will remain an increasing factor as “baby boomers” reach ages where cardiovascular disease and stroke are most prominent. Second, the obesity epidemic continues to grow as evidenced by the fact that several of Texas’ largest cities made the top ten list of America’s “fattest cities.” This dubious honor only reflects the challenge to our health care system which needs to promote better diet and increased physical activity participation beginning with Texas’ youth in their early years and continuing as a lifelong endeavor. Third, the epidemic of end stage kidney disease will result in a doubling of the number of Texans on kidney dialysis, primarily due to hypertension and diabetes mellitus. New scientific evidence indicates that aggressive medical treatment in early stages can prevent or delay the onset of this costly disease process. Fourth, the Lone Star State’s health care system has not achieved very stellar ratings for its effectiveness of health care delivery as manifested by its managed care and Medicare ratings (ranked number forty-five in the United States for treatment of myocardial infarction in the elderly.) Fifth, the Bomer Report points out the need for the Texas Department of Health to improve its communications with the Legislature by accurate reports. However, the quality of information is directly dependent on developing better biostatistical information or data collection systems.

In order to achieve these goals, the volunteer members of the Texas Council on Cardiovascular Disease and Stroke have completed their second year of service to develop and promote the **mission** of the council: **to educate, inform and facilitate action among Texans to reduce the human and financial toll of cardiovascular disease and stroke.** This will lead to meeting our **vision: Texans optimizing heart and brain health through education and action.**

The council's twelve members represent a broad area of expertise including cardiology, neurology, managed care, hospital administration, epidemiology, nursing, public health and nutrition. Despite having no budget, these highly motivated professionals have managed to develop a strategic plan for cardiovascular disease and stroke prevention and treatment which will lead Texas in its fight against its number one health problem in terms of cost, mortality, and lives affected. Texas Department of Health staff have been outstanding in their guidance and advice.

Our future is bright as we prepare to provide information to the 78<sup>th</sup> Texas Legislature and respond to its information requests. A Cardiovascular Disease Summit in San Antonio is scheduled for June 2002 as a joint effort of the Texas Department of Health, American Heart Association (Texas Affiliate), Texas Medical Association, Texas Public Health Association, and the Texas Association of Local Health Officials. In the fall of 2002, a meeting will be held to present cardiovascular problems and potential solutions to the future 78<sup>th</sup> Texas Legislature.

As chairman of the council, and representing its twelve dedicated volunteers, I would like to thank the members of the Texas Board of Health and the Commissioner of Health, Dr. Eduardo Sanchez, for their commitment to reducing Texas' number one health problem—cardiovascular disease and stroke. We, the council members, remain committed to reducing the high human and financial costs of these diseases.

Respectfully,



Melbert C. (Bob) Hillert, Jr., M.D., FACC, FACP, FAHA  
Chair, Texas Council on Cardiovascular Disease and Stroke

## Texas Commissioner of Health

Eduardo Sanchez, M.D., M.P.H.



## Council Staff at Texas Department of Health

Philip Huang, M.D., M.P.H.  
Chief, Bureau of Chronic Disease and  
Tobacco Prevention

Jennifer Smith, M.S.H.P.  
Director, Cardiovascular Health and  
Wellness Program

Richard Kropp, Program Specialist  
Bureau of Chronic Disease and Tobacco  
Prevention

Jeannie Woollard, Administrative Assistant  
Cardiovascular Health and Wellness  
Program

# Texas Council on Cardiovascular Disease and Stroke

## Current Council Members and Term Expiration Dates

Kirk A. Calhoun, M.D.  
2005

Bill Cummings  
2007

Kate Darnell, M.S.  
2005

Victor A. Diaz, M.D., M.P.H.  
2007

Melbert C. Hillert Jr., M.D.  
2003

Deanna Hoelscher, Ph.D., R.D.,  
L.D., C.N.S.  
2005

Randy Pennington, M.S.  
2003

Martha Simien, M.Ed.  
2007

Sharon Smalling, M.P.H., R.D.,  
L.D.  
2003

Diane Hurst Solomon, M.D.  
2003

Glenda J. Thompson, R.N.,  
M.S.N.  
2005

Michael J. Vintges  
2007

## Former Council Members

Steve R. Bailey, M.D.

Barbara Gill MacArthur, R.N.,  
M.N., F.A.A.N.

## A History of Legislative Action

The Texas Council on Cardiovascular Disease and Stroke was created in 1999 by the 76<sup>th</sup> Legislature. The charge of the council was large: to create a state plan to reduce the burden of cardiovascular disease (CVD) and stroke on the state and its citizens. The council has worked diligently over the past two years reviewing data such as mortality, morbidity, risk factor and hospital discharge reports to identify the status of disease. Additional information on current programs available to citizens in the state to assist in preventing or treating CVD and stroke has been presented. Strengths and weaknesses in the current system have been noted. The council asked for input from the various public and private entities in the state that work with or provide services to people at risk for developing, or who have already developed, CVD or stroke. These comments and observations have been incorporated in the council's strategic planning process.

In addition to development of this plan, the council is charged with developing a database of recommendations for appropriate care and treatment of patients with CVD or stroke and the collection, analysis and maintenance of a database on information related to CVD and stroke in the state. Progress on these two charges is summarized in the council's 2001 Legislative Report published in January 2001:

<http://www.tdh.state.tx.us/wellness/CVD/publications.htm>

## Timeline of Activities

Activity	Comments
Texas Coalition on CVD and Stroke formed in 1996.	Coalition formed and recommendations made to the 76th Legislature.
Texas Council on CVD and Stroke created in 1999 by the 76th Legislature.	Council legislatively mandated and attached to the Texas Department of Health (TDH). <b>No funding allocated.</b>
Texas Council on CVD and Stroke appointed by the Board of Health in January 2000.	Twelve members appointed representing health care, public health, education, and lay persons.
First meeting of the council in February 2000.	Council given its charge and determined to meet monthly during the year.
Presentations were made during 2000 from the Texas Education Agency, Texas Health Care Information Council, Texas Medical Association, University of Texas-Houston School of Public Health, and internal TDH Programs.	Data and updates on current status and ongoing activities presented for consideration by the council.
Request for consideration was made to the TDH exceptional item process by the council.	Funding for CVD prevention included in the TDH exceptional item process for consideration in the 2002/2003 appropriation request. <b>No funding allocated.</b>
Council appointments and reappointments were made in January 2001	New and current members reappointed for six year terms.
Vision, mission and strategies developed in February 2001.	Workgroups developed to identify action steps to address the strategies.
Action steps identified by work groups.	Work groups continue to identify necessary action steps.
Strategic planning process initiated for state plan.	More than 60 key stakeholders attend November 2001 meeting to provide input on goals and objectives based on Healthy People 2010 objectives for state plan. Council members present results and continue to refine objectives.

# Texas Council on Cardiovascular Disease and Stroke

## A Framework for Cardiovascular Health

The illustration below is intended to represent the full scope of cardiovascular health, including both the progressive development of cardiovascular disease and the opportunities for health promotion and disease prevention. It reflects extensive research that has led to a broad array of recognized interventions which the council continues to review, evaluate and recommend for implementation in Texas.

The council has formed five work groups (see page 6), representing the components necessary to forge comprehensive health promotion and disease prevention programs. Each work group reviews information, drafts action plans and makes recommendations to the full council for programs and activities at specific stages of the progression below.

### The Progressive Development of Cardiovascular Disease

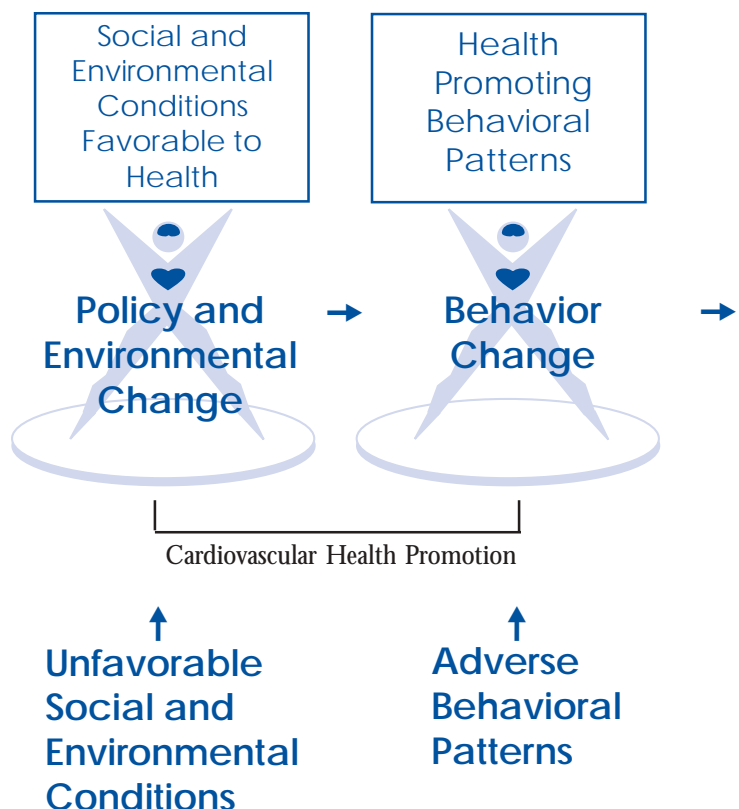
(heart disease and stroke)

*Framework adapted from a presentation at the First National CDC Prevention Conference on Heart Disease and Stroke, August 24, 2001.*

### A Vision of the Future for Texas:

### Recognized Interventions for Cardiovascular Health Promotion and Disease Prevention:

### The Present Reality:





## and Disease Prevention

The council work groups below provide the foundation for evaluating and implementing recognized cardiovascular interventions:

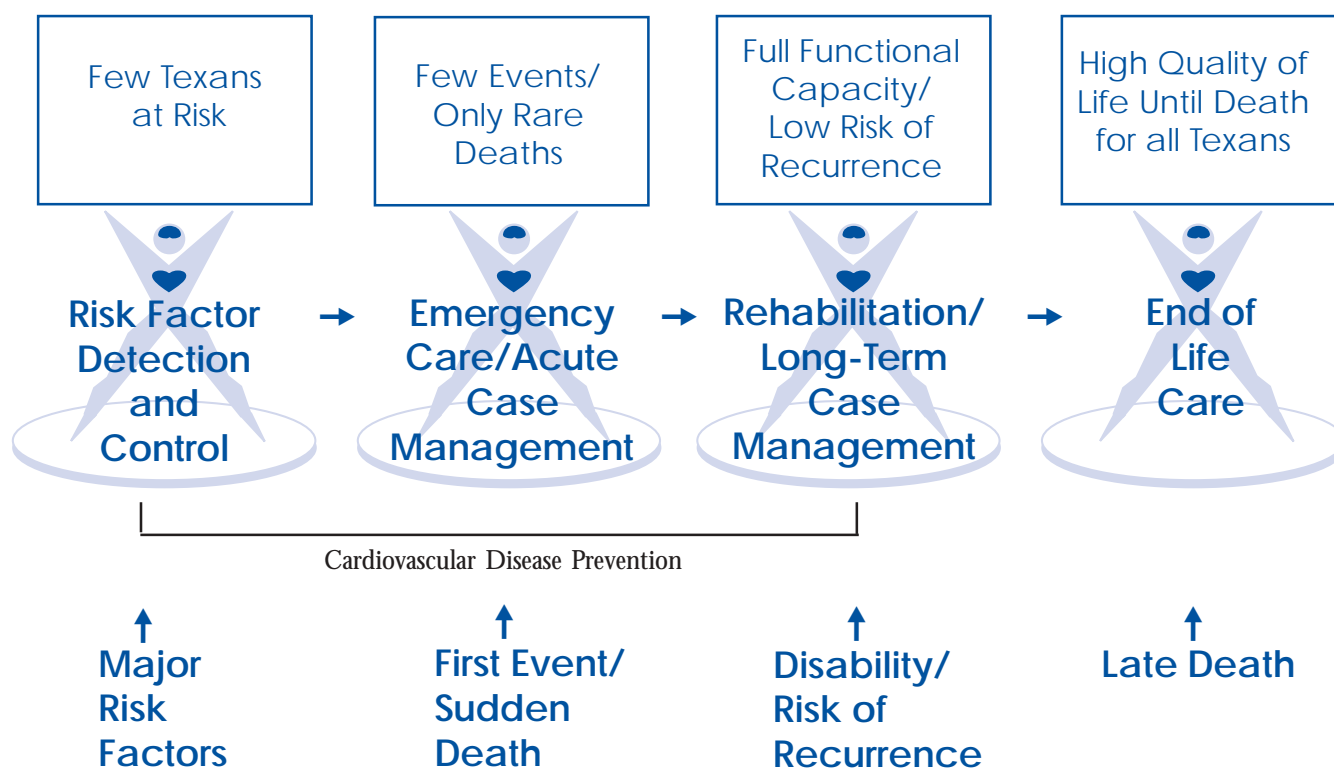
Surveillance, Data and Outcome Management

Health Education and Outreach

Community Policy and Environmental Changes

Clinical Prevention and Treatment Services

Resource Development



# Texas State Plan to Reduce Cardiovascular Disease and Stroke

## Goals and Action Steps

In November 2001, a “key stakeholder” meeting was held in conjunction with the regularly scheduled council meeting to review the Healthy People 2010 (HP2010) objectives relating to CVD and stroke developed by the U.S. Department of Health and Human Services. Participants were divided into four work groups corresponding to council work groups. Each work group was asked to recommend and refine action steps for Texas to address the objectives for cardiovascular disease and stroke, high blood pressure, high blood cholesterol, physical activity, nutrition/obesity and tobacco. The strategies, objectives and action steps that follow are the final product of key stakeholder recommendations and the structure the council has devised to guide its work in the years ahead.



### Surveillance, Data and Outcome Management

**Goal:** To assimilate current data, monitor trends over time, evaluate effectiveness (including cost-effectiveness) of programs and policies, and recommend new programs for enhancing outcomes.

#### Action Steps:

##### Ongoing

1. Collect and review data to identify populations at high risk. Data sources include information collected from sites such as schools, primary care physicians, OBGYNs, employers, as well as from the Behavioral Risk Factor Surveillance System, School Physical Activity and Nutrition Project and others that collect information such as cholesterol or high blood pressure readings, height and weight measurements, level of physical activity and nutritional intake, etc.



2. Collect and review health provider data to identify current practices for management of high cholesterol, high blood pressure, smoking, physical activity, nutrition management, etc. Data sources include the American Heart Association, Texas Medical Association, Texas Medical Foundation, Texas Health Care Information Council, and the Joint Commission on Accreditation of Health Care Organizations.
3. Collect and review baseline data from the Texas Tobacco Settlement pilot programs, to identify needs and gaps in addressing tobacco.
4. Convene regional partners to identify ways to collect regional data.
5. Work with the Texas Institute for Health Policy Research on data collection, research and policy development for cardiovascular disease and stroke.
6. Collate collected and reviewed data into a cardiovascular disease and stroke database.

**Special  
Populations to  
Address:**

1. Youth
2. African  
Americans
3. Persons with  
CVD and stroke



# Texas State Plan to Reduce Cardiovascular Disease and Stroke

## Goals and Action Steps

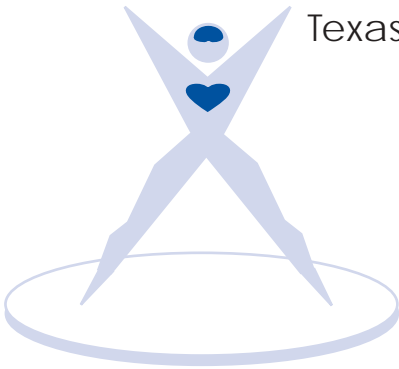
### Health Education and Outreach

**Goal:** To promote awareness and behaviorally-based health education to achieve cardiovascular health in Texas

#### Action Steps:

##### One Year

1. Use the CVH Clearinghouse at the TDH to promote evidence-based standards and model programs for awareness campaigns and behaviorally-based health education for cardiovascular health (CVH) and related risk factors (e.g., nutrition, physical activity, tobacco).
2. Implement or coordinate with an existing annual awards program to identify outstanding CVH promotion programs in Texas for schools, worksites, healthcare sites and communities.
3. Assess readiness of Texas schools, worksites and communities to implement behaviorally-based health education using tools such as the School Health Index (SHI) and Worksite Wellness Index; and evaluate risk awareness campaigns by using tools such as the Health Risk Appraisal Assessment and Behavioral Risk Factor Surveillance System (BRFSS).
4. Disseminate results of statewide surveillance such as Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Survey (YRBS), School Physical Activity and Nutrition Project (SPAN), Youth Tobacco Survey, and School-based Nutrition Monitoring. Develop plan to evaluate outcomes of awareness



campaigns and health education efforts through radio, TV, newspapers and other print medium.

5. Utilize the Texas School Health Network as a vehicle to diffuse survey results and best practices, provide training and solicit applications from school programs to be included in the CVH Clearinghouse.

### Two Year

1. Continue to identify needs and gaps in existing CVH and related risk awareness campaigns and behaviorally based health education in Texas.
2. Continue to coordinate and collaborate with agencies such as the Texas Department of Health, Texas School Health Network, Texas Medical Association, American Heart Association, Texas Bicycle Coalition, Texas Business Group on Health, and the Texas Education Agency on statewide and local dissemination of programs such as the Coordinated Approach to Child Health (CATCH) and the implementation of Senate Bill 19 (SB19) relating to health education and physical activity in schools; Walk Texas; Duck Anti-Tobacco Campaign; Safe Routes to School; Kids Walk to School Day; Commissioner's Challenge; Weight, Activity, Tobacco, Cholesterol, High Blood Pressure (WATCH); Heart Care Partnership; Operation Stroke and Operation Heartbeat.
3. Utilize the Texas School Health Network to provide training, support, and technical assistance for the implementation of SB19, including the development of School Health Advisory Councils, CATCH and other related requirements.

### Five Year

1. Support and participate in development of new awareness campaigns and behaviorally based health education programs to meet needs and gaps identified through surveillance and research.
2. Assist in the acquisition of funds for continued dissemination and implementation of activities that promote community sustainability of awareness campaigns and behaviorally based health education.

### Special Populations to Address:

1. Youth
2. African Americans
3. Persons with CVD and stroke



# Texas State Plan to Reduce Cardiovascular Disease and Stroke

## Goals and Action Steps

### Community Policy and Environmental Change



**Goal:** Create local champions that can bring groups together to develop a local comprehensive plan to promote cardiovascular health and stroke prevention through policy and environmental changes.

**Texas Objective:** Increase the proportion of worksites that provide comprehensive employer sponsored health programs that address physical activity, nutrition, weight management and tobacco use cessation; schools that offer comprehensive school health; and communities that offer programs and facilities for physical activity. Timeline – 3 years

### Action Steps:

#### One Year

1. Identify target communities based on prevalence of cardiovascular disease and stroke within each TDH Public Health Region to approach for development of a local comprehensive cardiovascular disease prevention program.
2. Develop community specific baseline data and track community results and activities through development of a database on community indicators at TDH that corresponds with HP 2010 objectives for target communities.
3. Utilize TDH staff or other community champions to create stakeholder partnerships that include the public sector, private sector, political sector and media to deliver the cardiovascular health promotion, disease prevention messages to their respective setting.

4. Provide resources through TDH or other organizations to identify community priorities and implement initiatives that reach local policy and environmental goals. Work with the Parks and Recreation Department, community agencies, national clubs and other business industries to expand parks and trails in the community and at worksites with bike, rollerblade, scooter and hiking and walking trails.
5. Promote evidenced-based best practices for policy and environmental changes for physical activity, nutrition and tobacco, such as stair use signs, point of purchase nutrition labeling and no smoking ordinances, with all Texas communities and worksites. Create and regularly update databases of best practices.
6. Implement an awards program through TDH that provides recognition to exemplary cardiovascular health promotion programs administered at the school, worksite, healthcare or community setting that focus on policy and environmental changes for physical activity, nutrition and tobacco.

#### Three Years

1. Promote Senate Bill 19 related to the statewide adoption of a coordinated school health program such as the Coordinated Approach to Child Health (CATCH) in conjunction with the Texas Education Agency.
2. Help enforce zero tolerance for smoking on school campuses.
3. Encourage adoption and improved enforcement of city smoking ordinances.

#### Five Years

1. Work with representatives from governmental, school, community and legislative sectors to incorporate physical education into the statewide assessment of student performance.

#### Special Populations to Address:

1. Youth
2. African Americans
3. Persons with CVD and stroke



# Texas State Plan to Reduce Cardiovascular Disease and Stroke

## Goals and Action Steps

### Clinical Prevention and Treatment Services



**Goal:** Educate the public and health care providers on the risk factors for CVD and stroke and work to ensure that screening, diagnosis and appropriate treatment are provided. Specifically, the risk factors include: high blood pressure, high cholesterol, tobacco, physical inactivity, poor nutrition, obesity and diabetes.

#### Two Years

1. Promote community involvement in screening and distributing risk factor educational materials through the American Heart Association, county health departments, local medical societies, the American Diabetes Association, Texas Dietetic Association, hospital outreach programs and other community health-oriented groups. Targeted settings for screening and education will include churches, work sites, supermarkets, pharmacies, health clubs, rehabilitation centers and public facilities such as banks and post offices. Educational materials will include appropriate blood pressure and cholesterol levels with a focus on the prevention of stroke and heart attack.
2. Through collaboration between TDH, AHA, ADA, TMA, and other health programs, adopt and promote a state-wide standardized screening tool to include screening for high blood pressure, high body mass index, increased cholesterol, elevated blood sugar and tobacco use.

3. Work with the community health programs and professional organizations listed above to develop a resource guide with community specific information on available resources for patient referrals. The guide will address options for obtaining medical treatment recommended during screening and resources to assist with stopping smoking and therapeutic lifestyle changes.\* (next page)
4. Utilize TMA HeartCare Partnership, TMA Stroke Project, AHA Get With the Guidelines and MyHeartWatch, and other professional educational programs to ensure that disease management and treatment of hypertension and cholesterol by health professionals meets the current recommendations of the National Heart, Lung and Blood Institute.
5. Compile and distribute to physicians a directory that explains the process to access assistance programs that help low-income patients obtain free medications to treat hypertension, high cholesterol and diabetes.
6. Increase health professionals' and the public's awareness of the appropriate Medical Nutrition Therapy used in the treatment of hypertension and hyperlipidemia through TMA's WATCH, the Community Nutrition Coalition, Texas Dietetic Association, Texas Association of Cardiovascular and Pulmonary Rehabilitation, AHA's Get With the Guidelines, and TDH's Put Prevention Into Practice Program.
7. Educate patients who have identifiable coronary disease or a positive family history to ensure that they know their lipid status and seek appropriate early treatment.
8. Train first responders through the use of programs such as AHA's Operation Heart Beat on the use of thrombolytics and other options for therapy in the field.

#### Acronyms:

ADA - American Diabetes Association

AHA - American Heart Association

TDH - Texas Department of Health

TDA - Texas Dietetic Association

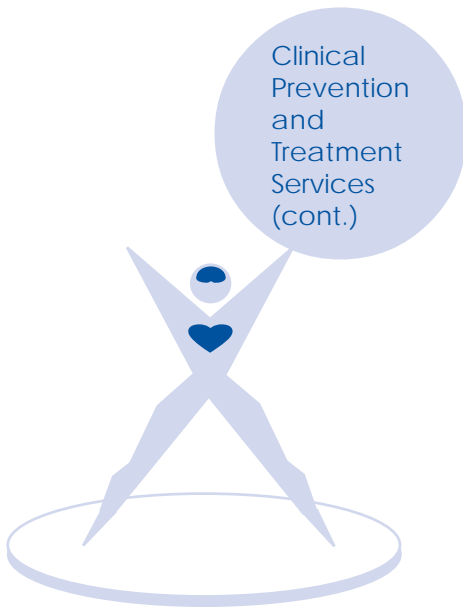
TMA - Texas Medical Association

#### Special Populations to Address:

1. Youth
2. African Americans
3. Persons with CVD and stroke







9. Promote physician education of state-of-the-science treatment of stroke through the TMA Stroke Project, Operation Stroke, Get With the Stroke Guidelines and other professional educational programs.
10. Promote medical student education regarding the optimal prevention and treatment of heart disease and stroke.
11. Utilize media campaigns such as AHA's Raise the Flag and stroke related educational materials.
12. Target Mexican American women due to their high incidence of the CVD and stroke risk factors of high blood pressure and diabetes. Increase the awareness of high blood pressure among Mexican Americans to increase its treatment and control.

#### **Five Years**

1. Set the expectation of a periodic health exam for all individuals to include a strong emphasis on preventive care by seeking support of the AHA, TMA, TDH and managed healthcare organizations.
2. Emphasize the importance of addressing the need for therapeutic lifestyle changes\* and promoting reimbursement for preventive services.
3. Increase the number of patients with stroke symptoms who arrive at the emergency department within 3 hours.

#### **\*Therapeutic Lifestyle Changes as defined by NCEP ATP III**

Essential features:

1. Reduced intakes of saturated fats (<7% of total calories) and cholesterol (<200 mg/day).
2. Therapeutic options for enhancing LDL lowering such as plant stanols/sterols (2 gm/day) and increased viscous (soluble) fiber (10-25 gm/day).
3. Weight reduction, if indicated.
4. Increased physical activity.

## **Cardiovascular Disease in Texas:**

Selected Statistics for Cardiovascular  
Disease and Stroke

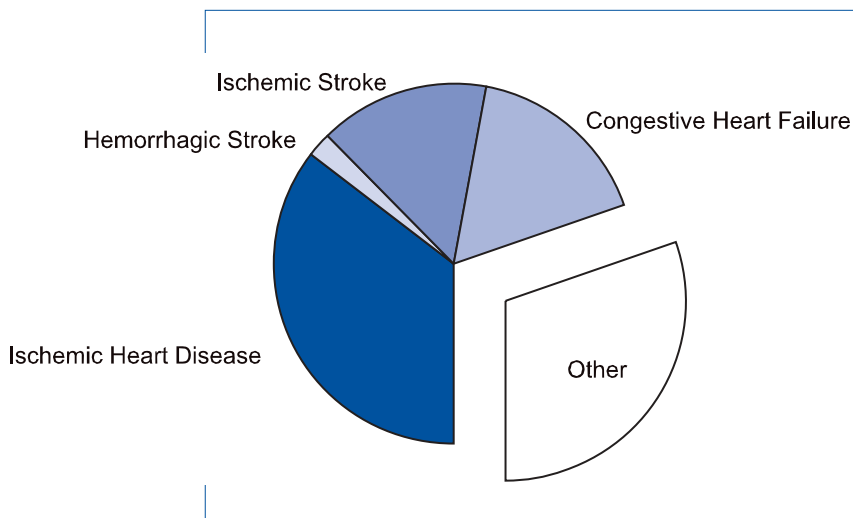
Risk Factors for Cardiovascular Disease  
and Stroke



# Cardiovascular Disease and Stroke in Texas

## Selected Statistics for Cardiovascular

CVD - related hospital discharges by diagnosis:



According to Texas hospital discharge data, almost 70 percent of all CVD related diagnosis were due to ischemic heart disease (35.4%), ischemic and hemorrhagic stroke (17.5%), and congestive heart failure (16.8%).<sup>1</sup>

**Cardiovascular disease (CVD)** refers to a group of diseases that target the heart and blood vessels and is the result of complex interactions between multiple inherited traits and environmental issues including diet, body weight, blood pressure, and lifestyle

habits. Common forms include heart disease, stroke, and congestive heart failure.

A major cause of CVD is atherosclerosis, a general term for the thickening and hardening of the arteries. It is characterized by deposits of fatty substances, cholesterol, and cellular debris in the inner lining of an artery. The resulting buildup is called

a plaque. These plaques can partially or completely occlude a vessel and may lead to heart attack or stroke.

The most prevalent forms of heart disease and stroke, in which narrowed or blocked arteries result in decreased blood supply to the heart or brain are referred to as ischemic heart disease and ischemic stroke. According to Texas hospital discharge data, almost 70 percent of all CVD related diagnosis were due to ischemic heart disease (35.4%), ischemic and hemorrhagic stroke (17.5%), and congestive heart failure (16.8%).<sup>1</sup>

Heart disease and stroke are not only the number one and number three killers in the nation and Texas (respectively), but together they are the number one drain on health care resources. According to the American Heart Association, 61,800,000 Americans are estimated to have one or more types of

## Disease and Stroke

cardiovascular disease. These diseases claim almost as many lives as the next seven leading causes of death combined.<sup>2</sup> Additionally, about 4.8 million Americans live with the debilitating effects of congestive heart failure, which is the single most frequent cause of hospitalization of Americans age 65 and older.<sup>3</sup>

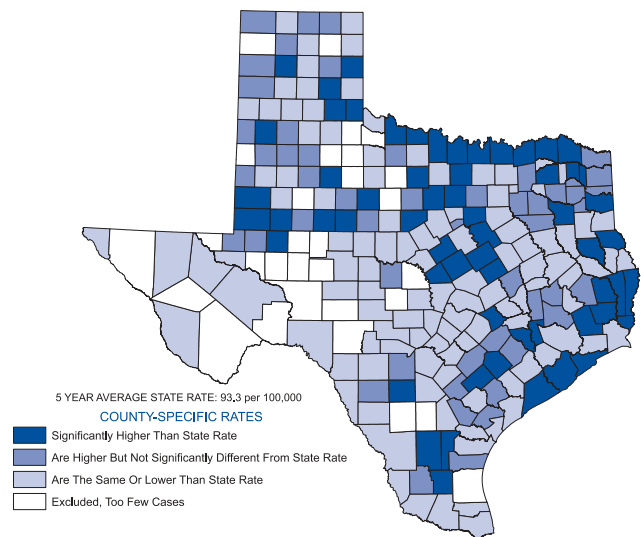
The American Heart Association has estimated that CVD will cost Americans \$329 billion in medical expenses and lost productivity in 2002.<sup>2</sup>

In Texas, cardiovascular disease claims 55,600 lives each year. It has been the leading cause of death in Texas since 1940 and currently accounts for 2 out of every 5 deaths.<sup>4</sup> Combined hospital charges for ischemic heart disease, hemorrhagic stroke, ischemic stroke and congestive heart failure will be an estimated \$7.5 billion in 2002.<sup>5</sup>

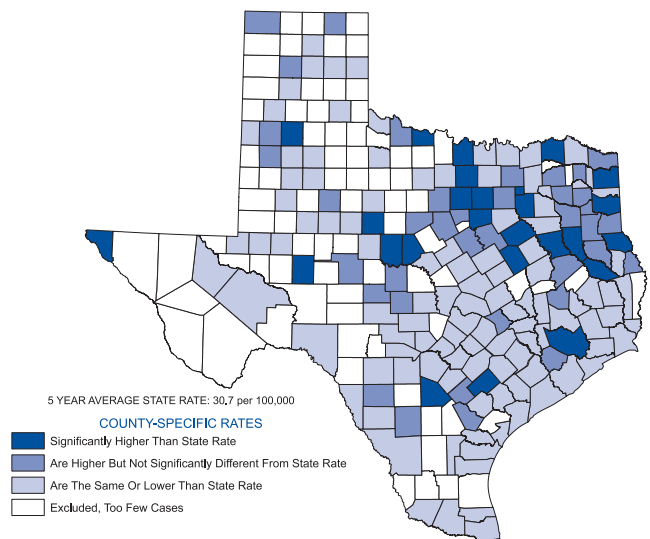
The first appearance of heart disease is all too often sudden and devastating. About 250,000 Americans die each year from heart attacks before reaching a hospital. Brain death and permanent death start to occur in just 4 to 6 minutes after someone experiences cardiac arrest. However, cardiac arrest can be reversed in most victims if it is treated with immediate CPR and an electric shock to the heart within 7 to 10 minutes.<sup>2</sup>

The average cost of coronary artery bypass totals \$44,200 per patient not including rehabilitation and lost productivity.<sup>6</sup> Approximately 10 to 20 percent of

ISCHEMIC HEART DISEASE  
5-YEAR AVERAGE AGE ADJUSTED MORTALITY RATES  
1994-1998



STROKE  
5-YEAR AVERAGE AGE ADJUSTED MORTALITY RATES  
1994-1998



# Cardiovascular Disease and Stroke in Texas

## Selected Statistics for Cardiovascular

**CVD accounts for 2 out of every 5 deaths in Texas.**

### Every hour:

More than 6 Texans will die from CVD

### Every day:

More than 150 Texans will die from CVD

### This year:

More than 55,600 Texans will die from CVD

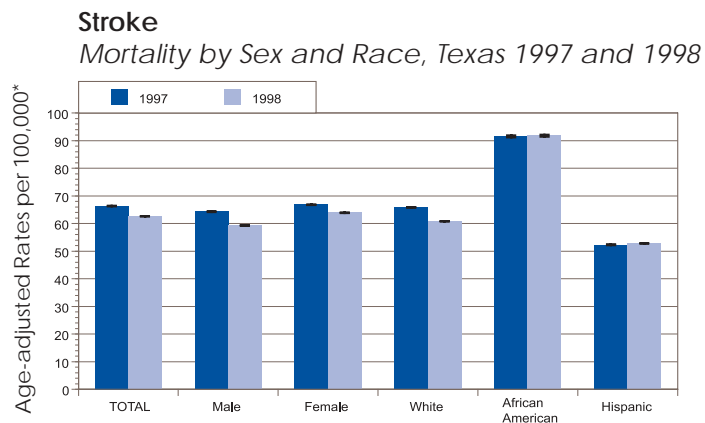
More than 9,000 of these deaths will happen to Texans between 40 and 64 years of age, resulting in more than 122,000 years of potential productive life lost in Texas before age 65.

bypass surgeries are repeat surgeries, and after 10 years, up to 50 percent of bypass grafts will become occluded.<sup>7</sup> The average cost per patient for the first 90 days post-stroke is \$15,000. Of note, 10 percent of cases exceed \$35,000.<sup>8</sup>

While the number of actual deaths from CVD and stroke have increased due to an aging population, mortality rates (ratio between mortality and the population) for CVD and stroke have been declining for many years. Factors affecting this decline may include more effective medical treatment, more emphasis on reducing controllable risk factors and better treatment for heart attack and stroke patients.<sup>2</sup> Nonetheless, CVD continues to be the major cause of death, particularly among Texas' minority populations. The highest mortality rate is found among the African American population, both in Texas and in the U.S.

In Texas, the 1998 mortality rate for ischemic heart disease among African Americans was 214 per 100,000, compared to 178 per 100,000 for whites and 145 per 100,000 for Hispanics. Additionally, the 1998 mortality rate for stroke among African Americans was 92 per 100,000, compared to 61 per 100,000 for whites and 53 per 100,000 for Hispanics.<sup>4</sup>

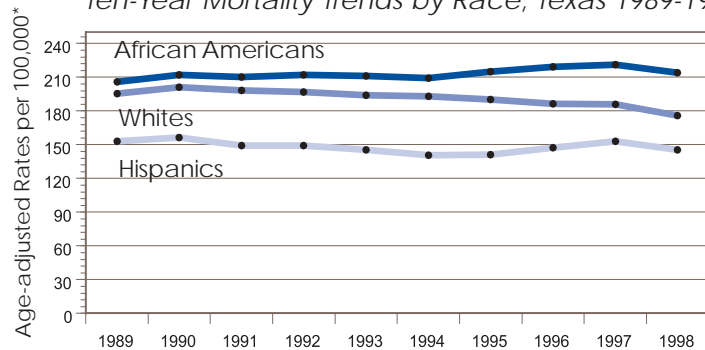
Source:  
Texas Bureau of  
Vital Statistics



## Disease and Stroke

### Ischemic Heart Disease

Ten-Year Mortality Trends by Race, Texas 1989-1998

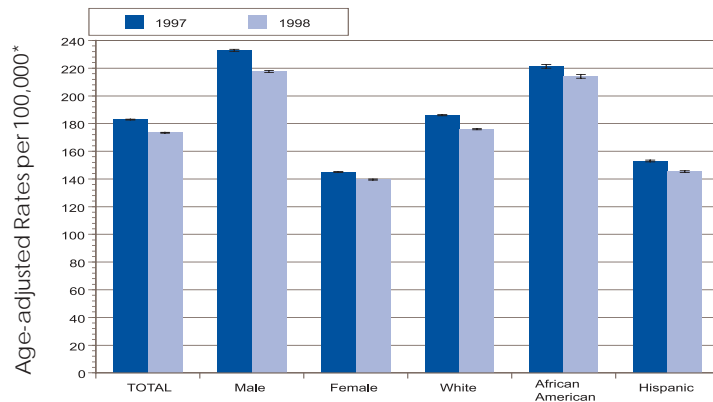


For more information about cardiovascular disease and stroke, visit the American Heart Association web site at

<http://www.americanheart.org>

### Ischemic Heart Disease

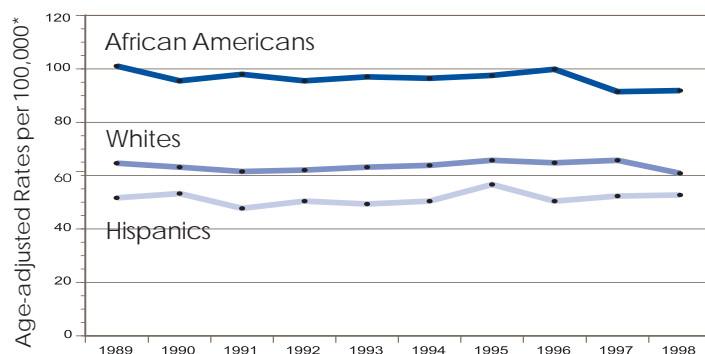
Mortality by Sex and Race, Texas 1997 and 1998



\*Age-adjusted to the 2000 US standard population

### Stroke

Ten-Year Mortality Trends by Race, Texas 1989-1998



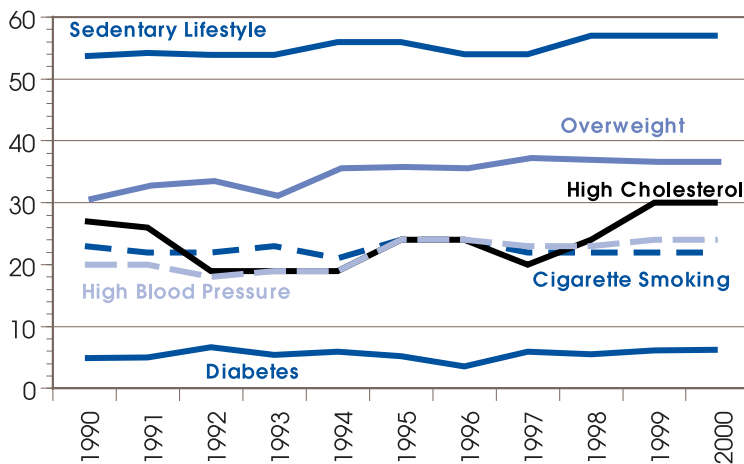
Source:  
Texas Bureau of  
Vital Statistics.

# Cardiovascular Disease and Stroke in Texas

## Risk Factors for Cardiovascular Disease

There are several factors that increase the risk of heart disease and stroke. The major *non-modifiable risk factors* are *heredity, male sex, and increasing age*. The *modifiable risk factors* are *smoking, high cholesterol, high blood pressure, obesity, and physical inactivity*. Another risk factor that contributes to one's risk of developing CVD is *diabetes*.

### Trends in Selected Risk Factors



Weighted percent of Texans  
Texas Behavioral Risk Factor Surveillance  
System, 1999

**Smoking:** *Tobacco use is the single largest cause of preventable death and disease in Texas*

Smokers generally have a twofold increased risk of heart disease, regardless of whether filtered or non-filtered cigarettes are used. Equally important, smoking is the *most reversible risk factor* for heart disease and stroke. Studies have shown that one year after people quit smoking, their **risk of heart attack drops by 50 percent, and within 15 years, the relative risk of dying from heart disease approaches that of a long-**

**time non-smoker.**<sup>2</sup> Smoking cessation is particularly important because it not only reduces risk of CVD, but also helps prevent cancer and chronic lung disease.

The **Texas Behavioral Risk Factor Surveillance System (BRFSS)** has been collecting risk factor prevalence data since 1987. Survey data show that about 22 percent of adult Texans (age 18 and older) classified themselves as current smokers. This observed prevalence exceeds the Healthy People 2010 target of reducing cigarette smoking to a prevalence of no more than 15 percent among people ages 18 and older. Data also show that prevalence trends for smoking have been steady since 1990.<sup>9</sup>



## and Stroke

According to 2000 Texas BRFSS data, the 18-29 year old age group had the highest percentage of tobacco use (25%). Smoking prevalence for whites was 23.9 percent, 16.3 percent for African Americans, and 19.7 percent for Hispanics.<sup>9</sup>

The Texas Tobacco Prevention Initiative in East Texas found that an alarming 32 percent of high school students are current cigarette smokers, compared to 22 percent of adults. Sixth-graders are the youth most at risk of becoming smokers.<sup>10</sup>

The risk of death from CHD increases by 30 percent among those exposed to environmental tobacco smoke at home or work.<sup>2</sup>

**Cholesterol:** *High blood cholesterol is a major modifiable risk factor for heart disease.* The cholesterol level in the blood is determined partly by inheritance and partly by acquired factors such as diet, calorie balance, and level of physical activity. Increased blood cholesterol, specifically high **LDL-cholesterol**, increases risk for heart disease. Epidemiologic data show that a reduction of at least 10 percent in total cholesterol may yield a 30 percent reduction in the incidence of coronary heart disease.<sup>11</sup>

Conversely, high levels of **HDL-cholesterol** protect against heart disease, irrespective of total cholesterol. Available evidence show that *for every 1 percent decrease in HDL-cholesterol, the risk for heart disease increases by 2-3 percent.*<sup>12</sup>

BRFSS survey data from 2000 show that **61 percent of Texans with CVD** reported having high cholesterol compared to **28 percent of Texans without CVD.**<sup>9</sup>

The National Cholesterol Education Program suggests **dietary modifications** such as reducing intake of saturated fat as the first intervention for treating undesirable cholesterol levels.

### National Cholesterol Education Program Guidelines

#### LDL Cholesterol

<100	Optimal
100-129	Near optimal/above optimal
130-159	Borderline high
160-189	High
≥190	Very high

#### Total Cholesterol

<200	Desirable
200-239	Borderline High
≥240	High

#### HDL Cholesterol

<40	Low
≥60	High

# Cardiovascular Disease and Stroke in Texas

## Risk Factors for Cardiovascular Disease

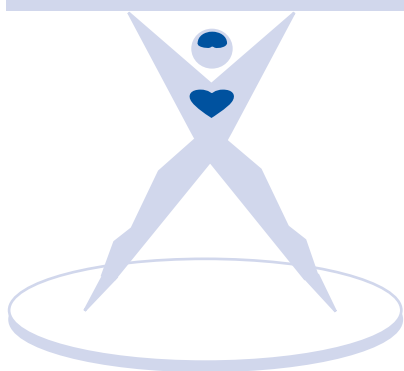
When dietary modifications are not sufficient in reaching cholesterol goals, medications as advised by a physician are indicated. While **cholesterol-lowering medications** can effectively lower total and LDL-cholesterol, few are able to raise levels of HDL-cholesterol. **Physical exercise** is one effective way of raising levels of protective HDL-cholesterol.

Optimal blood pressure for reducing cardiovascular risk:

<120/80 mm Hg

Treatment goal for those with high blood pressure:

<140/90 mm Hg



**High Blood Pressure:** According to BRFSS estimates, about 24 percent of Texans have high blood pressure; however, because there are often no symptoms, one-third of these people probably don't know they have it. <sup>2</sup> People with uncontrolled high blood pressure have an increased risk of developing heart disease and stroke compared to those with normal blood pressure. The Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (1997) has established a blood pressure of **<120/80 mm Hg as optimal with respect to cardiovascular risk.** <sup>13</sup>

**More than 63 percent** of Texans with heart disease surveyed in the BRFSS reported having high blood pressure. Overall, African Americans have the largest prevalence of high blood pressure at 33 percent, while whites and Hispanics were lower, 24 percent and 19 percent respectively. <sup>9</sup> Also, age is a significant predictor of hypertension prevalence with the higher age groups showing higher prevalence.

High blood pressure can often be prevented or treated with simple lifestyle modifications such as **sodium restriction, exercise and weight loss.** For those who cannot reach goal blood pressure (**<140/90 mm Hg**) with lifestyle changes, blood pressure medications prescribed by a physician can be very effective at

## and Stroke

controlling high blood pressure.

**Diet/Obesity:** Good nutrition is important for preventing heart disease and stroke. Healthy food habits help maintain normal blood pressure, desirable blood cholesterol levels and a healthy body weight. They may also aid in clotting, oxidation, maintaining a normal heart rhythm and other effects.<sup>2</sup>

Unfortunately, only 3 percent of all individuals meet four of the five recommendations of the U.S. Department of Agriculture for the intake of grains, fruits, vegetables, dairy products and meats.<sup>14</sup>

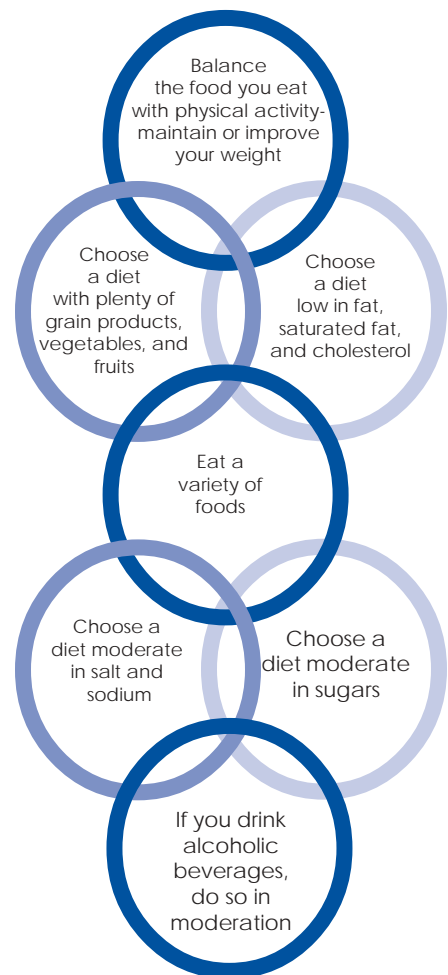
Even more alarming is the increasing trend of overweight and obesity in Texas and the nation. According to 2000 BRFSS data, more than 35 percent of adult Texans are overweight (BMI\* = 25-29.9), and another 25 percent are considered obese (BMI  $\geq$ 30).<sup>9</sup> Nationally, the percentage of overweight children has nearly doubled over the past two decades (from 7 to 13 percent) and the percentage of adolescents who are overweight has almost tripled (from 5 to 14 percent).<sup>14</sup> In 2000, the total cost of obesity in the United States was estimated to be \$117 billion (\$61 billion direct and \$56 billion indirect). Most of the cost associated with obesity is due to type 2 diabetes, coronary heart disease, and hypertension (high blood pressure).<sup>14</sup>

A gain of approximately 10 to 20 pounds results in an increased risk of coronary heart disease of 1.25 times in women and 1.6 times in men. Higher levels of body weight gain of 22 pounds in men and 44 pounds in women result in an increased coronary heart disease risk of 1.75 and 2.65, respectively.<sup>14</sup>

Individuals who are obese have a 50 to 100 percent increased risk of premature death from all causes compared to individuals with healthy weights.<sup>14</sup>

**\*BMI, or Body Mass Index,** is a ratio of weight to height (kg/m<sup>2</sup>) used to determine if one is overweight or obese.

### Dietary Guidelines for Americans



Fourth Edition, 1995  
U.S. Department of Agriculture  
U.S. Department of Health and Human Services

# Cardiovascular Disease and Stroke in Texas

## Risk Factors for Cardiovascular Disease

**Physical Inactivity:** The benefits of regular physical activity are well-established, and emerging studies continue to support an important role for daily physical activity in maintaining overall health. Physical activity decreases the incidence of CVD, lowers total cholesterol and increases HDL-cholesterol, lowers high blood pressure, reduces risk of developing type 2 (adult onset) diabetes, and increases longevity.<sup>15</sup>

Fortunately, it is becoming increasingly clear that physical activity does not need to be highly structured or regimented to yield health benefits. Furthermore, the threshold of intensity necessary for the health benefits of exercise is lower than previously thought. The Centers for Disease Control and Prevention suggests that all Americans should accumulate **at least 30 minutes of moderate-intensity physical activity on most, preferably all, days of the week.**<sup>15</sup>

Despite this overwhelming data, only 22 percent of adult Americans are currently active enough to derive health benefits while 25 percent are completely sedentary. Only about one-half of U.S. young people (12-21 years) regularly participate in vigorous physical activity and one-fourth report no vigorous physical activity.<sup>15</sup>

According to 2000 Texas BRFSS data, more than two-thirds (79%) of adult Texans are not getting the amount of physical activity recommended for greater health benefits.<sup>9</sup> Forty-two percent of adult Texans reported the main personal reason they are not more physically active is that they believe they are already getting enough physical activity. Thirty-seven percent of adult Texans reported the leading community reason for not being

... at least 30 minutes  
of moderate-intensity  
physical activity on  
most, preferably all,  
days of the week.



## and Stroke

more physically active to be the lack of enough fitness facilities, sidewalks, and organized programs.<sup>16</sup>

**Diabetes:** Persons with diabetes have the same risk of heart attack as people without diabetes who have already suffered a heart attack. For each individual risk factor present, the risk of CVD death is about three times greater in people with diabetes compared to the general population. The progression of diabetes works with other risk factors for CVD to accelerate the disease process. People with diabetes are at increased risk of severe atherosclerosis and other damage to blood vessels throughout the body. High blood pressure is also at least twice as common in people with diabetes.<sup>17</sup>

These complications not only produce specific diabetes-related problems such as retinopathy (eye disease) and nephropathy (kidney disease), but also lead to more severe consequences from heart attacks and strokes. Heart attack and angina may also go unrecognized as nerve damage resulting from diabetes prevents the sufferer from feeling pain.<sup>17</sup>

High blood pressure and kidney disease are a dangerous combination. Kidneys fail much more quickly when they are exposed to high blood pressure. Even a mild elevation in blood pressure may further injure kidneys already damaged by diabetes.<sup>18</sup>

According to the Texas Diabetes Council, about 6 percent of the adult Texas population has diagnosed diabetes while another 3 percent remain undiagnosed.<sup>19</sup>

Persons with diabetes have the same risk of heart attack as people without diabetes who have already suffered a heart attack.



# Cardiovascular Disease and Stroke in Texas

## References

1. Texas Hospital Inpatient Discharge Public Use Data File, January-June 1999. Texas Health Care Information Council, Austin, Texas.
2. American Heart Association. *2002 Heart and Stroke Statistical Update*. Dallas, Tex.: American Heart Association, 2001.
3. *Data Fact Sheet: Congestive Heart Failure in the United States: A New Epidemic*. National Heart, Lung, and Blood Institute, National Institutes of Health, September 1996.
4. Texas VitalNet, Texas Bureau of Vital Statistics, Texas Department of Health, January 2002.
5. Texas Hospital Inpatient Discharge Public Use Data File (1<sup>st</sup> & 2<sup>nd</sup> quarter, 1999).
6. American Heart Association. *1998 Heart and Stroke Statistical Update*. Dallas, Tex.: American Heart Association, 1997.
7. *Optimal Risk Factor Management in the Patient After Coronary Revascularization: A Statement for Healthcare Professionals From an American Heart Association Writing Group*. American Heart Association, 1994; 71-0062.
8. National Stroke Association. *Stroke Clinical Updates*, Vol. 5, Issue 3, September 1994.
9. Behavioral Risk Factor Surveillance System, Texas Department of Health, 2000.
10. *Texas Tobacco Prevention Initiative Infrastructure and Baseline Data*. Office of Tobacco Prevention and Control, Texas Department of Health. January 2001.
11. Centers for Disease Control and Prevention. State-Specific Cholesterol Screening Trends, United States 1991-1999. *MMWR* 2000;49(33): 750-755.
12. *National Cholesterol Education Program Third Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults*. U.S. Department of Health and Human Services; National Institutes of Health; National Heart, Lung, and Blood Institute; 2001.
13. *Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure*. U.S. Department of Health and Human Services, National Institutes of Health; National Heart, Lung, and Blood Institute; November 1997.
14. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2001*. U.S. Department of Health and Human Services Public Health Office. Office of the Surgeon General, Rockville, MD.
15. *Physical Activity and Health: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 1996.
16. *Texas Risk Factor Report: Physical Activity Among Texans*, Behavioral Risk Factor Surveillance System, Texas Department of Health, 1998.
17. Cockram, Clive. *Diabetes and Cardiovascular Disease: Double Jeopardy*. Diabetes Voice, Volume 46, June, Number 2/2001.
18. Rodby, Roger A., M.D. *Protecting those Fabulous Filters*. Diabetes Forecast, Volume 50, Number 3, March 1997.
19. A Plan to Prevent and Control Diabetes: The Promise of a Healthier Texas. Texas Diabetes Council/Program, Texas Department of Health, 2001.



## Appendix A:

# Healthy People 2010 Objectives Relating to CVD and Stroke

Healthy People 2010 (HP2010), the prevention agenda for the nation, focuses on 28 areas representing the most significant preventable threats to health in the United States. The objectives that follow include the HP2010 objectives that directly address CVD and stroke as well as those addressing risk factors for CVD and stroke.

Each objective includes the national baseline and target. Where data is available, Texas baselines and data sources are indicated.

For planning purposes, objectives are organized by council work groups most closely related to each objective, although progress on these objectives will often be dependent on activities supported by different combinations or all of the work groups. Acronyms for data sources are explained in the table at the end of this Appendix A.

Numbering of objectives corresponds to order in which they appear in the HP2010 documents found at the web site below:

<http://www.health.gov/healthypeople/document/>



# Healthy People 2010 Objectives - CVD and Stroke

## Surveillance, Data and Outcome Management

### Cardiovascular Disease

#### 12.1 Reduce coronary heart disease deaths.

Baseline: 208 deaths per 100,000 (NVSS 1998) (age-standardized to 2000)

Target: 166 deaths per 100,000; 20% improvement

#### Texas Baseline:

173.4 per 100,000 (BVS 1998) (age-standardized to 2000)

White: 175.9 per 100,000

Black: 214.1 per 100,000

Hispanic: 145.3 per 100,000

#### 12.7 Reduce stroke deaths.

Baseline: 60 deaths per 100,000 (NVSS 1998) (age-standardized to 2000)

Target: 48 deaths per 100,000; 20% improvement

#### Texas Baseline:

62.6 per 100,000 (BVS 1998) (age-standardized to 2000)

White: 60.8 per 100,000

Black: 91.8 per 100,000

Hispanic: 52.8 per 100,000

### High Blood Pressure

#### 12.9 Reduce the proportion of adults with high blood pressure.

Baseline: 28% of adults aged  $\geq 20$  years (NHANES 1988-94) (age-standardized to 2000)

Target: 16%

#### Texas Baseline:

23.7% of adults aged  $\geq 20$  years (BRFSS 1999)

### High Blood Cholesterol

#### 12.13 Reduce the mean total blood cholesterol levels among adults.

Baseline: mean 206 mg/dL among adults aged  $\geq 20$  years (NHANES 1988-94) (age-standardized to 2000)

Target: 199 mg/dL

#### 12.14 Reduce the proportion of adults with high total blood cholesterol levels.

Baseline: 21% of adults aged  $\geq 20$  years with total blood cholesterol levels  $\geq 240$  mg/dL (NHANES 1988-94) (age-standardized to 2000)

Target: 17%

#### Texas Baseline:

30.8% of adults aged  $\geq 20$  years with total blood cholesterol levels  $> 240$  mg/dL (BRFSS 1999)

## Physical Activity

### 22.1 Reduce the proportion of adults who engage in no leisure-time physical activity.

Baseline: 40% of adults aged 18 years and older engaged in no leisure-time physical activity (NHIS1997)(age adjusted to the year 2000 standard population)

Target: 20%

**Texas Baseline:** 27.8% of adults aged 18 years and older engaged in no leisure-time physical activity (BRFSS 1999)

### 22.2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Baseline: 15% of adults aged 18 years and older engaged in moderate physical activity for at least 30 minutes 5 or more days per week (NHIS 1997)

Target: 30%

**Texas Baseline:** 21.5% of adults aged 18 years and older engaged in moderate physical activity for at least 30 minutes 5 or more days per week (BRFSS 2000)

## Nutrition/Obesity

### 19.1 Increase the proportion of adults who are at a healthy weight.

Baseline: 42% of adults aged 20 years and older were at a healthy weight (NHANES 1988-94) (age-adjusted to the year 2000 standard population)

Target: 60%

**Texas Baseline:** 60.8% of adults aged 20 years and older were at a healthy weight (BRFSS 2000)

### 19.2 Reduce the proportion of adults who are obese.

Baseline: 23% of adults aged 20 years and older were identified as obese (NHANES 1988-94) (age-adjusted to the year 2000 standard population)

Target: 15%

**Texas Baseline:** 25.3% of adults aged 20 years and older were identified as obese (BRFSS 2000)

### 19.3 Reduce the proportion of children and adolescents who are overweight or obese.

(NHANES)	<u>1988-94</u>	<u>Target</u>
Baseline: Aged 6 to 11	11%	Target 5%
Aged 12to19	11%	Target 5%
Aged 6 to 19	11%	Target 5%

## Tobacco

### 27.1 Reduce tobacco use by adults.

Baseline: Cigarette smoking by adults aged 18 and older, (NHIS)1998, 24%

Target: 12%

**Texas Baseline:** 22% of adults aged 18 and older smoked cigarettes (BRFSS 2000)

### 27.2 Reduce tobacco use by adolescents. (Students grades 9-12)

Baseline: Tobacco products (past month), (YRBSS) 1999, 40%

Target: 21%

**Texas Baseline:** Tobacco products (past month), (TXYTS) 1998, 43%

## Health Education and Outreach

### High Blood Pressure, High Blood Cholesterol, Nutrition/Obesity, Physical Activity and Tobacco

- 7.2 Increase the proportion of middle, junior high, and senior high schools that provide comprehensive school health education to prevent health problems in the following areas: tobacco use and addiction, unhealthy dietary patterns, and inadequate physical activity.
- 12.2 (Developmental) Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing rapid emergency care by calling 911.
- 12.4 (Developmental) Increase the proportion of adults aged 20 years and older who call 911 and administer cardiopulmonary resuscitation (CPR) when they witness an out-of-hospital cardiac arrest.
- 12.8 (Developmental) Increase the proportion of adults who are aware of the early warning symptoms and signs of a stroke.

## Community Policy and Environmental Change

### Nutrition/Obesity

- 19.16 Increase the proportion of worksites that offer nutrition or weight management classes or counseling.

Baseline: 50% of worksites with  $\geq 50$  employees (NWHPS 1998-99)

Target: 85%

## Physical Activity

- 22.13 Increase the proportion of worksites offering employer-sponsored physical activity and fitness programs.**  
Baseline (NWHPS 1998-99) (varies by employee size)  
Target: 75%
- 22.11 (Developmental) Increase the proportion of the Nation's public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours (that is, before and after the school day, on weekends, and during summer and other vacations).**  
Target: 75%
- 22.8 Increase the proportion of the Nation's public and private schools that require daily physical education for all students.**  
Middle and junior high - YRBSS 1994 Baseline: 17% Target: 25%  
Senior high 2% 5%

## Tobacco

- 27.11 Increase smoke-free and tobacco-free environments in schools, including all school facilities, property, vehicles and school events.**  
Baseline: 37% of middle, junior high, and senior high schools (SHPPS 1994)  
Target: 100%
- 27.12 Increase the proportion of worksites with formal smoking policies that prohibit smoking or limit it to separately ventilated areas.**  
(See list for baseline for selected community sites, NWHPS)  
Target: each site in 51 states and districts
- 27.14 Reduce the illegal buy rate among minors through enforcement of laws prohibiting the sale of tobacco products to minors.**  
States and Districts 1998 Baseline (SSER): 0 Target: 51  
Territories : 0 Target: All
- 27.15 Increase the number of States and the District of Columbia that suspend or revoke State retail licenses for violations of laws prohibiting the sale of tobacco to minors.**  
States and Districts 1998 Baseline (STATE): 34 Target: 51
- 27.16 (Developmental) Eliminate tobacco advertising and promotions that influence adolescents and young adults.**
- 27.19 Eliminate laws that preempt stronger tobacco control law.**  
States (STATE) 1998 Baseline: 30 Target: 0

- 27.8 Increase insurance coverage of evidence-based treatment for nicotine dependency.**
- |  |     |              |
|--|-----|--------------|
| Managed care organizations (ATMCS)1998 Baseline: | 75% | Target: 100% |
| State Medicaid programs:                         | 24% | 51%          |
| All Insurance (developmental)                    |     |              |

## Clinical Prevention and Treatment Services

- 1.3 (Developmental) Increase the proportion of persons appropriately counseled about health behaviors.**
- 12.3 (Developmental) Increase the proportion of eligible patients with heart attacks who receive artery-opening therapy within an hour of symptom onset.**
- 12.5 (Developmental) Increase the proportion of persons with witnessed out-of-hospital cardiac arrest who are eligible and receive their first therapeutic electrical shock within 6 minutes after collapse recognition.**
- 12.6 Reduce hospitalizations of older adults with heart failure as the principal diagnosis.**
- |                                 |           |                  |
|---------------------------------|-----------|------------------|
| 65-74 years NHDS 1997 Baseline: | 13.4/1000 | Target: 6.5/1000 |
| 75-84 years                     | 26.9/1000 | 13.5/1000        |
| ≥85 years                       | 53.1/1000 | 26.5/1000        |

### High Blood Pressure

- 12.12 Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was high or normal.**
- Baseline: 90% of adults aged ≥18 (NHIS) (age-standardized to 2000)
- Target: 95%

**Texas Baseline:** 92.4% of adults aged ≥ 18 had their blood pressure measured (BRFSS 2000)

- 12.10 Increase the proportion of adults with high blood pressure whose blood pressure is under control.**
- Baseline: 18% of adults aged ≥18 with high blood pressure had it under control in 1988-94 (NHANES) (age-standardized to 2000)
- Target: 50%
- 12.11 Increase the proportion of adults with high blood pressure who are taking action (for example, losing weight, increasing physical activity, and reducing sodium intake) to help control their blood pressure.**
- Baseline: 72% of adults aged ≥18 with high blood pressure were taking action to control it in 1998 (NHANES) (age-standardized to 2000)
- Target: 95%

## High Blood Cholesterol

- 12.15** Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.

Baseline: 68% of adults aged  $\geq 18$  (NHIS) (age-standardized to 2000)

Target: 80%

**Texas Baseline:**

69% of adults aged  $\geq 18$  have had their blood cholesterol checked in preceding 5 years (BRFSS 2000)

- 12.16** (Developmental) Increase the proportion of persons with coronary heart disease who have their LDL-cholesterol level treated to a goal of less than or equal to 100.

## Nutrition/Obesity

- 19.17** Increase the proportion of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that include counseling or education related to diet and nutrition.

Baseline: 42% of physician office visits in 1997 (NAMCS)

Target: 75%

## Healthy People 2010 Objectives - CVD and Stroke Data Sources

NVSS	National Vital Statistics System
BVS	Texas Bureau of Vital Statistics
NHANES	National Health and Nutrition Examination Survey
BRFSS	Behavioral Risk Factor Surveillance System
NHIS	National Health Interview Survey
YRBSS	Youth Risk Behavior Surveillance System
NWHPS	National Worksite Health Promotion Survey
SHPPS	School Health Policies and Programs Study
SSER	State Synar Enforcement Reporting
STATE	State Tobacco Activities Tracking and Evaluation System
ATMCS	Addressing Tobacco in Managed Care Survey
NHDS	National Hospital Discharge Survey
NAMCS	National Ambulatory Medical Care Survey
TXYTS	Texas Youth Tobacco Survey

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## Appendix B:

### Policy/Regulations and Environmental Change Indicators for the Cardiovascular Health and Wellness Program, Texas Department of Health (TDH)

The following assessment provides an overview of the status of available policy and environmental changes within a community that promote the prevention of heart disease, cancer and diabetes. These interventions relate to physical activity, tobacco, and nutrition options in worksite, school, healthcare and community settings. Development of these indicators within a community leads to a more comprehensive approach to addressing chronic diseases.



# Policy, Regulations and Environmental Change Indicators for the

## **Policy/Regulation Interventions to Promote Physical Activity in Worksites**

1. Written Policies that support physical activity during duty time.
2. Policies that provide other incentives for engaging in physical activity.

## **Environmental Interventions to Promote Physical Activity in Worksites**

3. Employer/worksites providing an exercise facility on site.
4. Company sponsored fitness oriented programs for employees other than an exercise facility.
5. Employers/Worksites that provide and maintain outdoor exercise areas or playing fields for employee use.
6. Employers/Worksites with stairs that provide prompts to promote stair usage.
7. Exercise/physical fitness messages and information to employees

## **Policy/Regulation Interventions to Promote Nutrition in Worksites**

8. Policy requiring heart healthy food and beverage choices at employer/ worksite cafeterias.
9. Policies that require cafeterias to follow healthy food preparation guidelines and practices (e.g., steaming, low fat/salt substitutes, limited frying).
10. Policy that requires healthy food options for any meeting, conferences or training offered by the worksite.

## **Environmental Interventions to Promote Nutrition in Worksites**

11. Vending machines that offer heart healthy food and beverage choices.
12. Heart-healthy eating messages to the employee population.

## **Policy/Regulation Interventions to Promote No Tobacco Use in Worksites**

13. Establish policies that prohibit tobacco use in the worksite.

## **Environmental Interventions to Promote No Tobacco Use In Worksites**

14. Provide signs supporting tobacco laws and policies at the worksite.
15. Provide no smoking or smoking cessation messages to employees
16. Company sponsored smoking cessation oriented programs for employees.

# Cardiovascular Health and Wellness Program - TDH

## Policy/Regulation Interventions to Promote Physical Activity in Schools

17. Policies that require implementation of classroom instruction in physical education/physical activity, Pre K-12, that promotes enjoyable, lifelong participation in physical activity.
18. Policies to include daily physical education in curriculum of schools, Pre K-12 for all students (includes disabled students.)

## Environmental Interventions to Promote Physical Activity in Schools

19. Physical activity facilities available in schools.
20. Availability of school physical activity facilities outside of school hours
21. Schools that promote a walk-to-school program.

## Environmental Interventions to Promote Nutrition in Schools

22. Availability of appealing, low-fat food choices in schools.
23. Promotion of healthier food selections in school food service environment (cafeteria)

## Policy\Regulation Interventions to Promote No Tobacco Use in Schools

24. Establish policies that prohibit tobacco use in the school.

## Environmental Interventions to Promote No Tobacco Use in the Schools

25. Provide signs supporting tobacco laws and policies at the school.
26. Provide no smoking or smoking cessation messages to students.
27. School sponsored smoking cessation oriented programs for students.

## Environmental Interventions to Promote Physical Activity in the Community

28. Promotion of walking.
29. Sidewalk, walking trail availability.
30. Bike lane availability.
31. Facilities available, that support leisure -time physical activity
32. Media messages that support policy\environmental changes for physical activity.

## **Policy, Regulations and Environmental Change Indicators (cont.)**

### **Policy/Regulation Interventions to Promote Nutrition in the Community**

- 33. Policies to access heart-healthy foods and beverage choices at group functions

### **Environmental Interventions to Promote Nutrition in the Community**

- 34. Healthy food and beverages available in vending machines in public buildings.
- 35. Restaurants that offer heart-healthy food and beverage choices indicated on the menu.
- 36. Media and advertising messages that support policy/environmental changes for nutrition.

### **Policy/Regulation Interventions to Promote No Tobacco Use in the Community**

- 37. Sales to Minors

### **Environmental Interventions to Promote No Tobacco Use in the Community**

- 38. Media messages that support policy/environmental changes for physical activity.
- 39. Restaurants that are tobacco free.

### **Policy/Regulation Interventions to Promote CVH, Physical Activity, Tobacco, and Nutrition in Healthsites**

- 40. Healthsites that adopt a policy to provide routine physical activity and tobacco counseling and medical nutrition therapy as part of their standard care during medical visits.

### **Environmental Interventions to Promote CVH, Physical Activity, Tobacco, and Nutrition in Healthsites**

- 41. Health sites that routinely provide physical activity and tobacco counseling and medical nutrition therapy to patients as part of their standard care during medical visits.

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## Appendix C:

# The CVD and Stroke Clearinghouse

The **CVD and Stroke Clearinghouse** is a project of the Texas Council on Cardiovascular Disease and Stroke **Health Education and Outreach Work Group** at the Texas Department of Health. In its efforts to coordinate health education, public awareness, and community outreach activities relating to CVD and stroke, the group has identified a number of resources and organizations dedicated to preventing CVD and stroke in Texas and the nation.

Links to web sites for these resources are divided among the six general headings to the right. Many of the links addressing professional reference materials and guidelines were recommended by the Clinical Prevention and Treatment Services Work Group.

Visit the Clearinghouse online at:

<http://www.tdh.state.tx.us/wellness/CVD/clearinghouse/index.htm>

## Contents

State Resources

National Resources

Private Resources

School Resources

Surveillance & Evaluation

Professional Reference Materials and Guidelines



# CVD and Stroke Clearinghouse

## State Resources

### **Texas Council on Cardiovascular Disease and Stroke**

<http://www.tdh.state.tx.us/wellness/CVD/CVD.htm>

### **Texas Department of Health - Tobacco Prevention**

Office of Tobacco Prevention and Control

<http://www.tdh.state.tx.us/otpc/>

Texas Tobacco Prevention Initiative

<http://www.tdh.state.tx.us/otpc/Pilot/default.htm>

Duck Campaign (Youth Tobacco Prevention)

<http://www.ducktexas.com>

Texas Duck Days (Youth Tobacco Prevention)

<http://www.txduckdays.org/>

### **Texas Department of Health - Community Resources**

Healthy Trails/

Community Planning Models - How to Build a Walking Trail

[http://www.tdh.state.tx.us/wellness/resource\\_list.htm](http://www.tdh.state.tx.us/wellness/resource_list.htm)

Walk Texas!

<http://www.tdh.state.tx.us/diabetes/walktx/index.html>

Community Mini-grants for CVD Prevention

<http://www.tdh.state.tx.us/wellness/minigrants/overview.htm>

### **Texas Department of Health - Worksite Resources**

5 a Day - 5 a Week, Maintain No Gain, Lighten Up Texas,  
Skyscraper Climb

[http://www.tdh.state.tx.us/wellness/resource\\_list.htm](http://www.tdh.state.tx.us/wellness/resource_list.htm)

**Texas Council on Cardiovascular Disease and Stroke**

# CVD and Stroke Clearinghouse



## State Resources

### **Texas Department of Health - Clinical Resources**

Put Prevention into Practice

<http://www.tdh.state.tx.us/ppip/index.htm>

Clinician Guide to Cessation (link to Virtual Office of the Surgeon General)

<http://www.surgeongeneral.gov/tobacco/>

### **American Cancer Society**

Quit Line - Toll free support for smoking cessation

1-877-YES-QUIT

### **Texas Medical Association**

Project WATCH

<http://www.texmed.org/has/prs/pwh/watch1.asp>

HeartCare Partnership

<http://www.texmed.org/has/prs/hcp/default.asp>

Stroke Project

<http://www.texmed.org/has/prs/tsp/default.asp>

Physician Oncology Education Program

Tobacco Cessation Center

<http://www.texmed.org/has/prs/pop/stc.asp>

### **Texas Commission on Alcohol and Drug Abuse**

Red Ribbon Week

<http://www.tcada.state.tx.us/redribbon/>



# CVD and Stroke Clearinghouse

## National Resources

### **American Academy of Neurology**

<http://www.aan.com/>

### **American Academy of Pediatrics**

<http://www.aap.org/>

### **American Association of Cardiovascular and Pulmonary Rehabilitation**

<http://www.aacvpr.org/>

### **American Association of Clinical Endocrinologists**

<http://www.aace.com/>

### **American College of Cardiology**

<http://www.acc.org/>

### **American Heart Association - Clinical Resources**

<http://www.americanheart.org/>

Enter the following titles in the Search field:

CVD Risk Factor Education Program  
Guide to Primary Prevention of Cardiovascular Diseases  
Secondary Prevention Guidelines  
Compliance Action Program  
Get with the Guidelines  
American Stroke Association  
Council on Cardiovascular Nursing  
Stroke Council

### **American Heart Association - Community Resources**

<http://www.americanheart.org/>

Enter the following titles in the Search field:

MyHeartWatch  
Operation Heartbeat  
CPR Awareness  
AED Placement  
Operation Stroke  
Heart at Work  
American Heart Walk  
Take Wellness to Heart  
Choose to Move

**Texas Council on Cardiovascular Disease and Stroke**

# CVD and Stroke Clearinghouse



## National Resources

### **American Heart Association - School Resources**

<http://www.americanheart.org/>

Enter the following titles in the Search field:

Jump Rope for Heart  
Heart Power  
Hoops for Heart

### **American Lung Association**

<http://www.lungusa.org/>

### **American Medical Association**

<http://www.ama-assn.org/>

### **Association for the Advancement of Retired Persons (AARP)**

<http://www.aarp.org/index.html>

### **Centers for Disease Control and Prevention**

<http://www.cdc.gov/>

Cardiovascular Health Program

<http://www.cdc.gov/nccdphp/cvd/>

Cardiovascular Health Branch

<http://www.cdc.gov/nccdphp/cvd/branch.htm>

Division of Nutrition and Physical Activity

<http://www.cdc.gov/nccdphp/dnpa/>





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## National Resources (continued)

Office on Smoking and Health  
<http://www.cdc.gov/tobacco>

Division of Diabetes Translation  
<http://www.cdc.gov/diabetes/>

Division of Adolescent and School Health  
<http://www.cdc.gov/nccdphp/dash/>

### **National Heart, Lung, and Blood Institute**

<http://www.nhlbi.nih.gov/index.htm>

National Cholesterol Education Program (NCEP)  
<http://www.nhlbi.nih.gov/about/ncep/index.htm>

National High Blood Pressure Education Program  
<http://www.nhlbi.nih.gov/about/nhbpep/index.htm>

Your Guide to Lowering High Blood Pressure / DASH Diet  
<http://www.nhlbi.nih.gov/hbp/index.html>

News and Press Releases  
<http://www.nhlbi.nih.gov/new/index.htm>

### **National Stroke Association**

<http://www.stroke.org/>

Stroke Center Network  
<http://www.stroke.org/scn.cfm>

Acute Treatment  
[http://www.stroke.org/acute\\_treat.cfm](http://www.stroke.org/acute_treat.cfm)

### **American Alliance for Health, Physical Education, Recreation and Dance**

<http://www.aahperd.org/>

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# CVD and Stroke Clearinghouse



## Private Resources

### **Baylor Health System**

<http://www.nhlbi.nih.gov/index.htm>

### **Memorial Hermann Healthcare System Heart Services**

<http://www.mhhs.org/services/heartservice.html>

<http://www.mhhs.org/services/MBMI.html>

### **University of Texas-Houston Physicians - Cardiology**

<http://www.utcardiovascular.com/>

### **Cardiovascular Research Institute**

<http://mphywww.tamu.edu/Default.html>

### **CATCH (Coordinated Approach To Child Health)**

<http://www.sph.uth.tmc.edu/chppr/catch/>

## **Community Programs**

American Volkssport Association

<http://www.ava.org/>

National Senior Games Association

<http://www.nsga.com/>

Texas Senior Games Association

<http://www.tsga.org/>

Quit and Win

<http://www.quitandwin.org>

Walk to School Day-USA

<http://www.walktoschool-usa.org/>



# CVD and Stroke Clearinghouse

## School Resources

### **American Heart Association**

<http://www.americanheart.org>

Enter the following titles in the Search field:

Jump Rope for Heart

Heart Power

Hoops for Heart

### **Division of Adolescent and School Health - CDC**

<http://www.cdc.gov/nccdphp/dash/>

### **CATCH - Coordinated Approach to Child Health**

<http://www.sph.uth.tmc.edu/chppr/catch/>

### **Project T.N.T. Curriculum - Tobacco prevention for 7th graders**

<http://www.cdc.gov/nccdphp/dash/rtc/tob-curric.htm>

### **Red Ribbon Week**

<http://www.tcada.state.tx.us/redribbon/>

### **Healthy Start Curriculum**

<http://www.healthy-start.com/>

## School Surveillance and Evaluation

### **Youth Risk Behavior Surveillance System (YRBS)**

<http://www.cdc.gov/nccdphp/dash/yrbs/index.htm>

### **Texas Youth Tobacco Survey**

<http://www.tdh.state.tx.us/otpc/stats/statistics.htm>

### **School Health Index**

<http://www.cdc.gov/nccdphp/dash/shi/>

### **Texas Commission on Alcohol & Drug Abuse**

<http://www.tcada.state.tx.us/>

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# CVD and Stroke Clearinghouse



## Surveillance and Evaluation

**Behavioral Risk Factor Surveillance System - CDC**

<http://www.cdc.gov/nccdphp/brfss/>

**Texas Behavioral Risk Factor Surveillance System**

<http://www.tdh.state.tx.us/chronicd/>

**Restaurant Survey**

<http://www.tdh.state.tx.us/wellness/foodesta.htm>

**Bureau of Vital Statistics - Texas Department of Health**

<http://www.tdh.state.tx.us/bvs/default.htm>

**Texas Health Care Information Council**

<http://www.thcic.state.tx.us/>

**Physical Activity and Nutrition Survey**

<http://www.tdh.state.tx.us/wellness/topten.htm>

**Worksite Wellness Index**

[http://www.tdh.state.tx.us/wellness/resource\\_list.htm](http://www.tdh.state.tx.us/wellness/resource_list.htm)

**Community Wellness Index**

[http://www.tdh.state.tx.us/wellness/resource\\_list.htm](http://www.tdh.state.tx.us/wellness/resource_list.htm)

**Health Risk Appraisal Assessment**

[http://www.tdh.state.tx.us/wellness/resource\\_list.htm](http://www.tdh.state.tx.us/wellness/resource_list.htm)



# CVD and Stroke Clearinghouse

## Professional Reference/Guidelines

**Guidelines for Ischemic Stroke - Texas Council on Cardiovascular Disease and Stroke**

<http://www.tdh.state.tx.us/wellness/CVD/clearinghouse/istroke.htm>

**Circulation: Journal of the American Heart Association**

<http://circ.ahajournals.org/>

**foodandhealth.communications**

<http://www.foodandhealth.com/handout.shtml>

**theheart.org - cardiology online**

<http://www.theheart.org/>

**The National Blueprint: Increasing Physical Activity Among Adults Age 50 and Older**

[http://www.rwjf.org/app/rw\\_publications\\_and\\_links/rw\\_pub\\_other.jsp](http://www.rwjf.org/app/rw_publications_and_links/rw_pub_other.jsp)

**Diary MAX Nutrition Network**

<http://www.dairymax.com/>

**Third Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III)**

<http://www.nhlbi.nih.gov/guidelines/cholesterol/index.htm>

**Center for Weight and Health**

<http://www.cnr.berkeley.edu/cwh/index.html>

**University of South Carolina School of Public Health Prevention Research Center**

<http://prevention.sph.sc.edu/>

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